

What STEM Can Be

The key to students' success is not only to learn science, technology, engineering, and math, but also to understand how those disciplines apply to the world around them. Students need to develop the critical skills that will prepare them for beyond the classroom, enabling them to be tomorrow's engineers and innovators.

Boxlight STEM solutions open the door to inquirybased learning in all four STEM fields: science, technology, engineering, and mathematics. Consistently, simply, and quickly make STEM a part of your everyday lessons with Labdisc - our portable science lab, Mimio MyBot - robotics and coding, and Robo 3D printers coupled with the MyStemKits - K-12 STEAM curriculum. Our STEM products help students connect and engage with STEM from wherever they are.







Why STEM Matters

STEM is of critical importance to students – it enables them to build the essential skills they need to be successful. Students learn most effectively when teaching reflects the real world. Using STEM to solve everyday challenges helps students gain a deeper understanding of the world around them. There are many facets to a complete STEM education solution. **3D Printing**

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- engineers is expected to increase at four times the rate of all other occupations.
- The United States ranks 20th among all nations in the proportion of 24-year-olds who earn degrees in natural science or engineering.

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Student

Outcomes

STEM

STEM

How to Create Engaging **STEM** Experiences

STEM encompasses some of the most dynamic and interesting subjects in schools. STEM-based learning will help create tomorrow's educators and innovators and keep us competitive in a global economy. Below are the keys to successfully implementing STEM:

1. Inspire Problem-Solving

STEM activities should be roll-up-your-sleeves learning. They should be about doing. Ideally, students will collaborate and solve the problems together, and gain a more involved and deeper understanding. Karen Worth, a senior researcher and longtime science educator at Education Development Center (EDC), points out that handson learning in not "simply manipulating things." Rather, it is "engaging in in-depth investigations with objects, materials, phenomena, and ideas, and drawing meaning and understanding from those experiences."

2. The True Value of Technology

Use it or create it! Using technology means more than just presenting a lesson on an IWB or using a document camera. It means bringing the technology into the lesson in a way that adds value and takes the activity to a new level. The Labdisc portable lab allows students to measure their world, analyze real-time data samples, and develop a skilled scientific response, while our Robo 3D printers allow teachers to print engaging manipulatives and students to engineer custom solutions.

3. Real-World Learning

Our STEM lessons hinge around real-world problems so that students can come up with real-world solutions. STEM is about going beyond the classroom to look at the broader picture. What does the data you collected reveal about the environment? How can you engineer a safe water filtration system for someone after a hurricane? How do robots use sensors to collect information about their surroundings? STEM inspires students to ask big questions and seek meaningful answers.

4. Teamwork & Design-Thinking

Integrating teamwork and the engineering design process is instrumental to solving problems. The process is cyclical - repeated as needed to reach the desired solution. The key aspects for students to grasp from this process are the importance of teamwork, the need to be creative, and the open-ended nature of the work. Our collection of STEAM Design Challenges develops the design-thinking process.

"This will be a wonderful way to obtain some of the hands on tools that generally prove too expensive for a small school like ours to typically have access to, which will definitely enrich the educational experiences of our students."

Elizabeth Wyatt, Exceptional Student Education Teacher















Engaging **STEM tools** for the modern student

Our STEM solution provides a selection of standalone products that each address a different aspect of STEM education: 3D printing, robotics, and sensors. Select one product or all of them to suit your needs. In addition to a host of standalone lesson plans included with each, these products also feature integrated lesson plans that combine the different tools together for even more interactive and interdisciplinary activities perfect for the 21st century classroom! All curriculum is available through one comprehensive curriculum platform: www.MyStemKits.com

Whether it's whole-class learning, small-group collaboration or STEM-based learning, Boxlight offers the services, software, and classroom technology that enable teachers to easily and effectively enhance student outcomes and build essential skills such as critical thinking, collaboration, communication, and creativity that will prepare the students for beyond the classroom, enabling them to be tomorrow's engineers and innovators.

Want to learn what STEM can be with Boxlight? Visit boxlight.com/STEM.

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Robotics and Coding Portable STEM Labs

by Boxlight



COBO Education-Driven 3D Printers

MAKING STEM LEARNING IMPACTFUL WITH 3D PRINTING IN THE CLASSROOM

- Turn-key, ready to use right out of the box with tutorial videos to make it easy for even the most beginner users.
- Fully enclosed 3D printers with HEPA filter for safety in classrooms, makerspaces, and libraries.
- Wi-Fi + Hot Spot enabled for Chromebook and iPad compatibility including Robo cloud printing.
- Lifetime customer support and an extended 2-year warranty.
- Included online training certification course and spare parts pack.
- Includes a Starter Plan to MyStemKits, the curriculum platform for all your MimioSTEM solutions. Find hundreds of standards-driven lessons, STEAM Design Challenges, and ready-to-3D print models that stream directly to your printer.



Want to Learn More About Robo 3D? Visit boxlight.com/robo

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THE BEST WAY TO INCORPORATE 3D PRINTING IN YOUR CLASSROOM

Robo's 3D printers are built for educators with an easy-to-use interface, compatibility with Google Chromebooks and Apple iPads, & 24/7 lifetime customer support. Complemented by leading professional training and an extensive range of STEAM lesson plans.

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Educational Robotics System

AN INNOVATIVE PLATFORM TO LAUNCH ROBOTICS IN THE CLASSROOM.

Mimio MyBot bridges the gap between learning about robotics and the application of robotics in the real world. Our intuitive and accessible system helps students develop core skills in programming, engineering, and robotics. We provide a system to facilitate learning and ignite a passion in students with the freedom and flexibility to build, code, and test new and unique models.

- Robotic controller does not require any special software or cables to connect with the student workstation. All you need is a browser to start learning.
- Intuitive and easy-to-use interface.
- Includes a Starter Plan to MyStemKits, the curriculum platform for all your MimioSTEM solutions. Find hundreds of standards-driven lessons!



Want to learn more about Mimio MyBot? Visit boxlight.com/mimiomybot

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LEARN WITHOUT LIMITS

Mimio MyBot is a flexible system that encourages creativity and exploration. Built from rugged, aerospace-grade materials, our system is made to survive the rigors of classroom use. Includes a Starter Plan to MyStemKits curriculum library for math, science, and coding applications.





Labisc Portable STEM Labs

A STEM LAB THAT CAN GO ANYWHERE, WITHOUT COMPLICATED **EXPERIMENT SETUP.**

- Wireless, compact data logger for every science, with up to 15 built-in sensors. Clear the clutter with a single device!
- Up to 150 hours of battery life make it a practical tool for inside or outside the classroom. The ideal solution for long-term experiments such as plant growth, weather change, and pollution.
- Ever ready with zero setup time, automatic sensor testing, and calibration - maximizes valuable lab time.
- Includes a Starter Plan to MyStemKits, the curriculum platform for all your MimioSTEM solutions. Find hundreds of standards-driven lessons!

An award-winning solution that opens the door to inquiry-based learning in a variety of science fields.



Want to learn more about Labdisc? Visit mimio.boxlight.com/labdisc

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INQUIRY-BASED LEARNING WAS NEVER SO EASY!

geography. With our STEM science lab, they are.

by Boxlight



Curriculum, Virtual STEMMyStemKits.comKits, & 3D-Print Library

MAKING STEM LEARNING IMPACTFUL WITH STANDARDS-DRIVEN CURRICULUM, EDUCATIONAL 3D MODELS, & VIRTUAL STEM KITS.

- 350+ K-12 Lesson Plans plus 30+ Design Challenges spanning STEAMrelated topics for all of your MimioSTEM tools: 3D printers, sensors, and robots. Plus, it includes a custom library of virtual STEM kit simulations.
- Standards-driven curriculum developed by a leading research university aligned to NGSS, Common Core, and State Standards in every lesson.
- Includes printer management compatible with 75+ 3D printers.
- Teachers can browse content by product subject and/or grade level, or search by standard. It's EASY.
- MyStemKits lessons include a teacher guide, standards-alignment, student handouts and assessments, ready-to-print 3D models, and programming or design procedures, as applicable.



Want to Learn More About MyStemKits? Visit boxlight.com/mystemkits

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THE BEST WAY TO INCORPORATE EDUCATIONAL TECHNOLOGY

A tool is only as good as its uses. Put your MimioSTEM products into action using this award-winning all-in-one platform. Find ready-to-use curriculum for your products so you can start confidently on day one. All subscriptions include an online training certification course.

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